



## HEALTHY WORKPLACES SUMMIT 2022 - Healthy Workplaces Lighten the Load

### PREVENTION OF MUSCULOSKELETAL DISORDERS AND PSYCHOSOCIAL RISKS IN THE WORKPLACE: EU STRATEGIES AND FUTURE CHALLENGES

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# INTRODUCTION - MULTIFACTORIAL AETIOLOGY OF WORK-RELATED MSDs

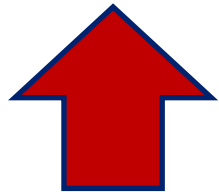
*Work-related disorders were defined as multifactorial diseases among a working population that are the result of a number of different factors and which can be caused and/or aggravated, partially and not exclusively, by work and occupational exposures (WHO, 1985).*



**Determinants of work-related MSDs:**  
**A combination of individual, physical, psychological, social and work-related aspects**



- Biomechanical overstrains
- Ergonomic discomfort



Further occupational and non-occupational factors:

- several demographic and individual characteristics
- health conditions and comorbidities;
- risk factors linked to unhealthy behaviours and lifestyles
- psychosocial risks;
- digitalisation and the use of new technologies in the workplace

# INTRODUCTION: PSYCHOSOCIAL RISKS AS DETERMINANTS OF MSDS

- **Psychosocial risks:** those aspects of the work design, organisation and management, and the relative social context that may have a potential negative impact on psychological, physical and social health and well-being (Cox & Griffiths, 2005; ILO, 1986).
- Psychosocial and organisational factors, such as high workload/demands, low social support, low job control, low job satisfaction and monotonous work, raise the risk of MSDs, **especially when combined with physical risks.**
- The rapid progress of technological innovation, demographic **changes** and modifications in the labour market, especially new forms of work and new ways of performing jobs are bringing **the exacerbation of some existing psychosocial risks and the emergence of new ones**

PSYCHOSOCIAL HAZARDS	
<b>Job content</b>	Lack of variety or short work cycles, fragmented or meaningless work, under use of skills, high uncertainty, continuous exposure to people through work
<b>Workload &amp; work pace</b>	Work overload or under load, machine pacing, high levels of time pressure, continually subject to deadlines
<b>Work schedule</b>	Shift working, night shifts, inflexible work schedules, unpredictable hours, long or unsociable hours
<b>Control</b>	Low participation in decision making, lack of control over workload, pacing, shift working, etc.
<b>Environment &amp; equipment</b>	Inadequate equipment availability, suitability or maintenance; poor environmental conditions such as lack of space, poor lighting, excessive noise
<b>Organisational culture &amp; function</b>	Poor communication, low levels of support for problem solving and personal development, lack of definition of, or agreement on, organisational objectives
<b>Interpersonal relationships at work</b>	Social or physical isolation, poor relationships with superiors, interpersonal conflict, lack of social support
<b>Role in organisation</b>	Role ambiguity, role conflict, and responsibility for people
<b>Career development</b>	Career stagnation and uncertainty, under promotion or over promotion, poor pay, job insecurity, low social value to work
<b>Home-work interface</b>	Conflicting demands of work and home, low support at home, dual career problems

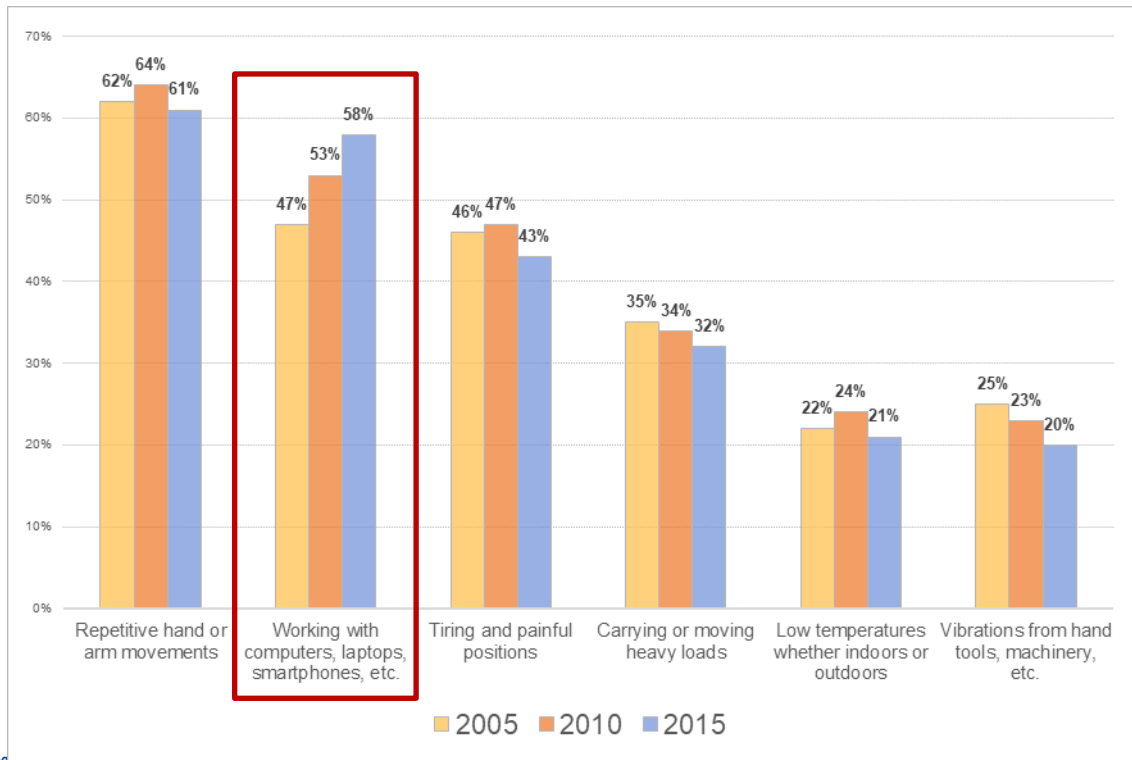
# PREVALENCE OF MSDs IN EUROPE

Highest **percentage** of workers suffering from one or more **MSDs in the past 12 months**:

- Finland 79%, France 75% and Denmark 73%; **Italy 58%**.
- Most frequent in **construction, water supply, and agriculture, forestry and fishing, human health and social work activities** (EU-OSHA, 2019)
- MSDs are slightly higher for **female workers** (60%);
- The workers **over 55 years** reported more often (67%) one or more MSDs than workers under 25 years (45%);
- The workers with only **pre-primary or primary education** are more likely to report MSDs.

# PREVALENCE OF MSDs IN EUROPE

Percentage of workers reporting that they are exposed to different physical risk factors at their work at least a quarter of the time, EU-25 in 2005, EU-28 in 2010 and 2015



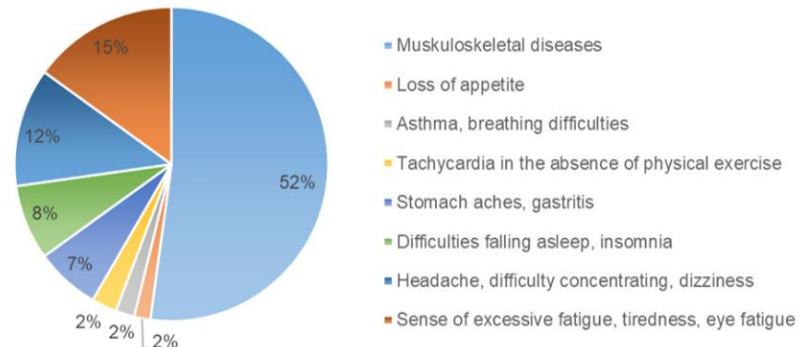
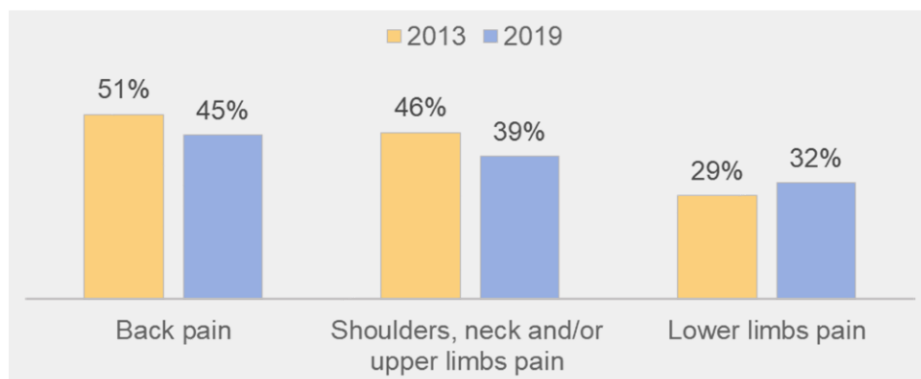
## MSDs AT NATIONAL LEVEL: THE CASE OF ITALY

**Total reports of occupational diseases in Italy compared with those relating to the musculoskeletal system in the last 5 years**

	2016	2017	2018	2019	2020
Diseases of the musculoskeletal system and connective tissue	38,681 (64.23%)	37,608 (64.85%)	39,001 (65.59%)	40,887 (66.81%)	30,355 (67.52%)
Other reported occupational diseases	21,537 (35.77%)	20,387 (35.15%)	20,460 (34.41%)	20,314 (33.19)%	14,600 (32.84%)
Total	60,218	57,995	59,461	61,201	44,955

Adapted from INAIL, 2021

## Musculoskeletal pains suffered by workers in the 6 months before the survey



Di Tecco et al. 2022- EU OSHA Discussion paper  
Elaboration on Insula 2013 and 2019 datasets (INAIL, 2014, 2021b)

## Correlations between musculoskeletal pains suffered by workers in the 6 months prior to the survey and some psychosocial risks and self-reported lack of well-being

	Effort Reward Imbalance	Control	Harassment and Violence	Support	Job insecurity	Mental Health
Back pain	.149**	-.028*	.085**	-.054**	-.004	.189**
Shoulders, neck and/or upper limb pain	.135**	-.023*	.073**	-.065**	.002	.173**
Lower limb pain	.110**	-.048**	.061**	-.069**	-.017	.185**

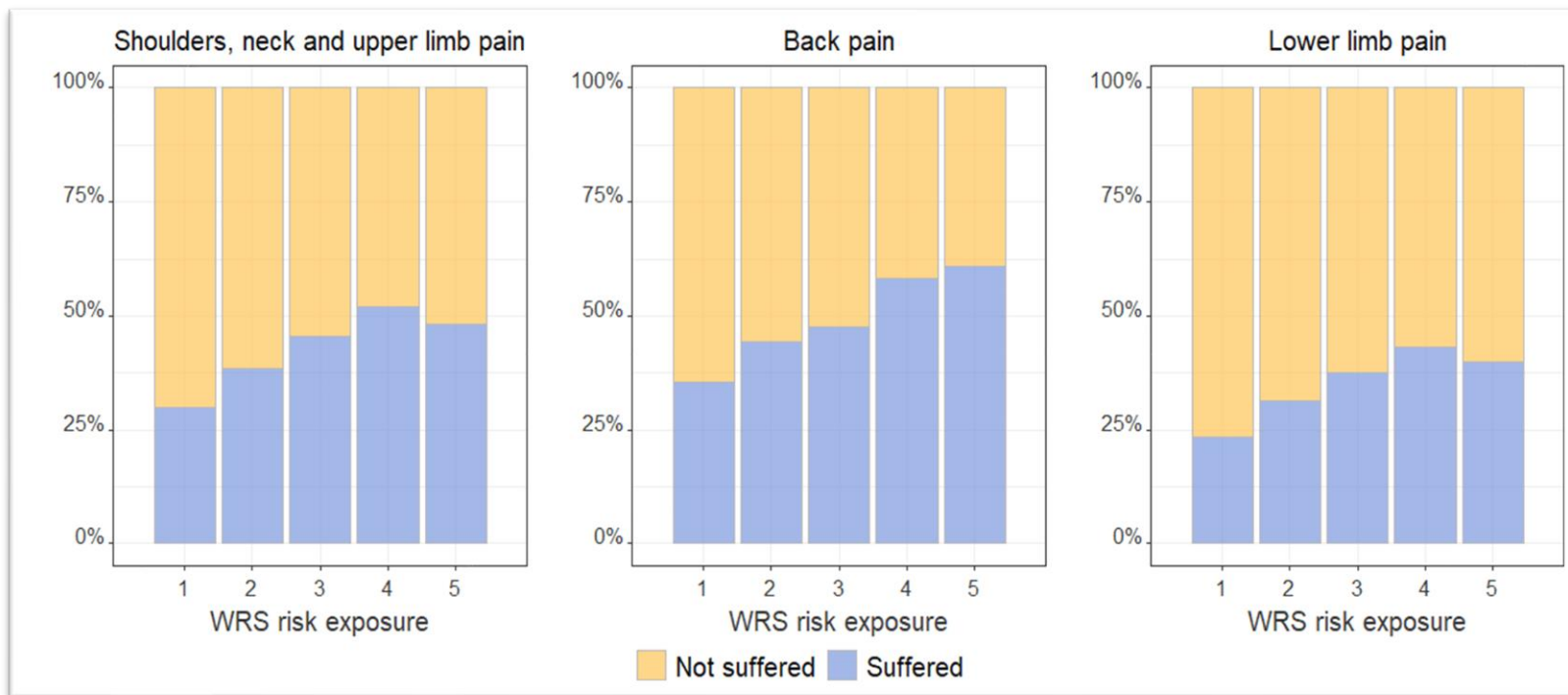
\* p-value > .05

\*\* p-value > .00

Di Tecco et al. 2022- EU OSHA Discussion paper  
Elaboration on Insula 2013 and 2019 datasets (INAIL, 2014, 2021b)

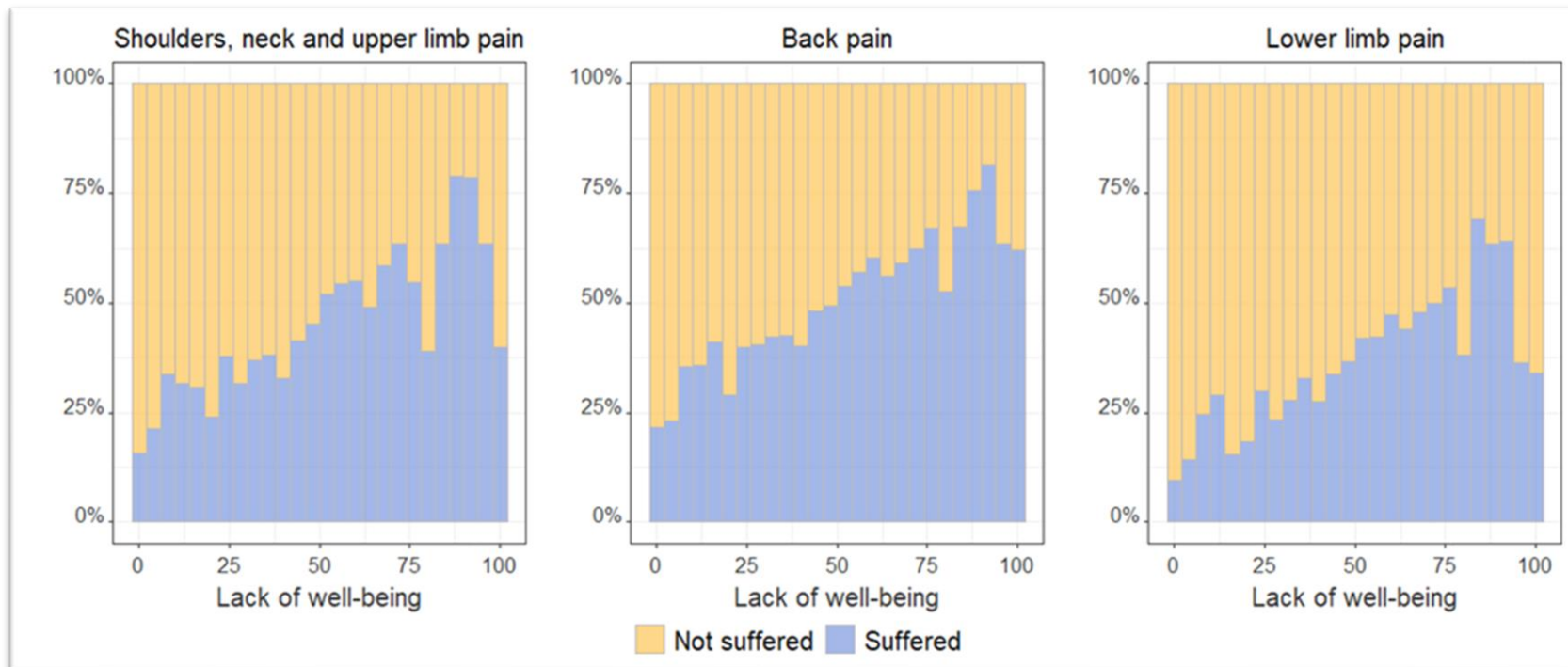


## Self-reported health disorders and work-related stress risk exposure



Di Tecco et al. 2022- EU OSHA Discussion paper  
Elaboration on Insula 2013 and 2019 datasets (INAIL, 2014, 2021b)

## Self-reported health disorders and lack of well-being



Di Tecco et al. 2022- EU OSHA Discussion paper  
Elaboration on Insula 2013 and 2019 datasets (INAIL, 2014, 2021b)

[www.healthy-workplaces.eu](http://www.healthy-workplaces.eu)

# Hard and soft policies and their impact on MSDs' prevention

- Framework Directive 89/391/EEC on occupational safety and health
- Directive 89/655/EEC – then amended by Directive 2009/6/EC – concerning the minimum safety and health requirements for the use of work equipment
- Directive 89/656/EEC on minimum safety and health requirements for the use of personal protective equipment
- Directive 90/269/EEC on the minimum health and safety requirements for the manual handling of loads
- Directive 90/270/EEC on the minimum safety and health requirements for work with display screen equipment.
- Relevant legislative update by EU Commission reviewing of the workplace Directive 89/654/EEC and the display screen equipment Directive 90/270/EEC
- European strategies for health and safety at work 2014-2020 and 2021-2027
- EU-OSHA 2020-2022 campaign 'Healthy Workplaces Lighten the Load'

# TOWARDS AN INTEGRATED APPROACH TO MANAGE AND PREVENT MSDS

**PUBLIC HEALTH  
INTERVENTIONS**

**OCCUPATIONAL  
HEALTH INTERVENTIONS**

**PREVENTION**



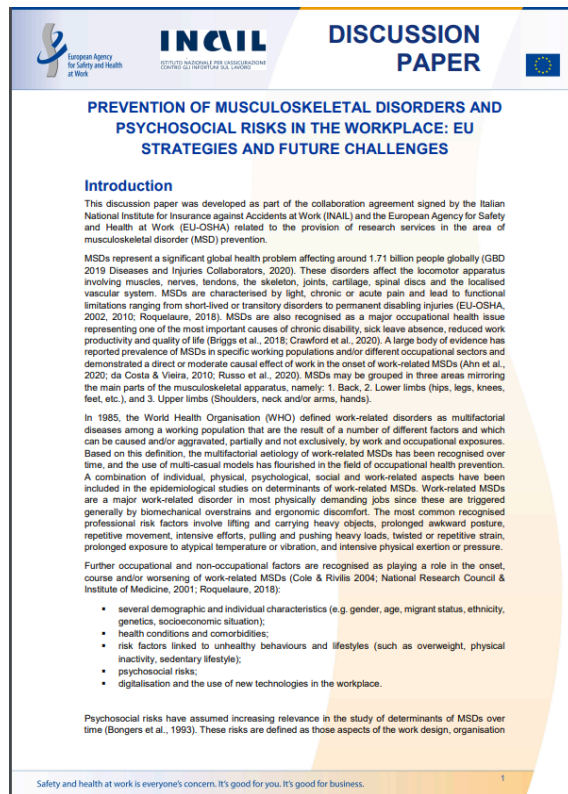
**PROMOTION**

**PROTECTION**

# Conclusions

- Work-related **MSDs** still represent a significant **global health problem**
- The **multifactorial aetiology** of work-related MSDs has been recognised over time, and the use of **multi-casual models** has flourished in the field of occupational health prevention.
- **Psychosocial and organisational factors** raise the risk of MSDs, especially when combined with physical risks.
- The **future of work** is bringing several opportunities but challenges as well in occupational health and safety as the exacerbation of some existing psychosocial risks and the emergence of new ones.
- The management of MSDs has been going towards a **renewed focus** on improving musculoskeletal health prevention in the workplace **using multifactorial models**
- The **main challenge** in preventing work-related MSDs is advancing a **multidisciplinary approach** to health policy and strategy at European and national system levels **towards integrated models** to assess and manage all the potential determinants of MSDs.

# MANY THANKS FOR YOUR ATTENTION!



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